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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,417	12/22/2003	Jeff Scott Eder	VM-56	7517

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ASSET TRUST, INC.
2020 MALTBY ROAD
SUITE 7362
BOTHELL, WA 98021

EXAMINER	
CHENCINSKI, SIEGFRIED E	
ART UNIT	**PAPER NUMBER**
3695	

MAIL DATE	DELIVERY MODE
09/30/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,417	EDER, JEFF SCOTT	
	Examiner	Art Unit	
	SIEGFRIED E. CHENCINSKI	3695	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *125-150* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *125-150* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/11/10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 11, 2010 has been entered.

Status

2. Claims 125 – 150 are pending.

Claims 125-149 are amended.

The objection to the Abstract is withdrawn based on Applicant's amendments of it.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 125-132 are rejected under 35 USC 101** because the claimed invention is directed to non-statutory subject matter. Independent claim 125 recites a process comprising three steps of receiving and a step of selecting. Dependent claims 126-132 are rejected because of their dependence on independent claim 125.

Based on Supreme Court precedent, a proper process must be tied to another statutory class or transform underlying subject matter to a different state or thing (*Diamond v. Diehr,* 450 U.S. 175, 184 (1981); *Parker* v. *Flook,* 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson,* 409 U.S. *63,* 70 (1972); *Cochrane* v. *Deener,* 94 U.S. 780,787-88 (1876)). Since neither of these requirements is met by the claim, the method is not considered a patent eligible process under 35 U.S.C. 101. To qualify as a

statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state. Without these elements the invention involves human interaction which is not patentable subject matter.

The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article. See Benson, 409 U.S. at 70. Certain considerations are applicable to analysis under either branch. First, as illustrated by Benson and discussed below, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility. See Benson, 409 U.S. at 71-72. Second, the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. See Flook, 437 U.S. at 590. (*In re Bilski*, En banc, U.S. Court of Appeals for the Federal Circuit, Washington, DC, Oct. 30, 2008). Per *In re Bilski*, these requirements must be present in each meaningful limitation step and must not merely rely on such limitations in the preamble.

In the instant case, one limitation appears to contain significant solution activity and should therefore contain the statutory component or refer to it. The remaining steps may contain the statutorry component. The steps data are considered insignificant or extra solution steps. Further, the statutory component must more specifically be an automated programmed electronic computer or computer processor or computer server, since simply a computer could mean a human using a desktop computer to perform all of the linking steps by hand using various tools including a computer to perform all of the claimed tasks. For example, the first limitation or at least the significant solution step should be stated as "selecting through the use of an automated programmed electronic computer system …". Then, if the claimed invention is in fact a computer automated process, each prior and succeeding step could simply state “by” the computer system …”. Otherwise a human could still be using a computer to perform any steps which simply claim a “computer system”. However. it appears to the examiner that applicant may not have support for overcoming this rejection since humans made a part of the steps in the Figures.

Please note the Board of Patent Appeals Informative Opinion *Ex parte Langemyer et al-* http://iplaw.bna.com/iplw/5000/split_display.adp?fedfid=10988734&vname=ippqcases2&wsn=500826000&searchid=6198805&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

4. Claims 125-150 are rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. The independent claims 125, 133, 140 and 148, with claim 125 as exemplary, are so broad that they would monopolize a natural force or patent a scientific fact, e.g. by claiming every mode of an effect of the claimed law of nature, or, in the instant case, every mode of predictive model using stepwise regression analysis. Dependent claims 126-132 are rejected because of their dependence on independent claim 125.

5. Claims 125-150 are rejected under 35 USC 101 the claimed invention lacks patentable utility. The output of a predictive model in the independent claims is not tangible and the claimed invention is not supported by either a clearly asserted utility or a well established utility. No concrete set of data relating to any specific phenomenon is being manipulated. The preamble fails to state the particular application and purpose for the use of a predictive model and the steps do not result in establishing an identifiable result. Further, no particular predictive model is specified. Therefore, an ordinary practitioner of the art would see no particular use for the claimed invention. It is as if one was looking at a table of contents in a textbook of quantitative analytical techniques without seeing a page giving particular application examples. Dependent claims 126-150 are rejected because of their dependence on the rejected independent claims.

6. Claims 125-150 are rejected under 35 USC 101 because the claimed inventions of the independent claims lack patentable utility. The two-pronged transformation analysis in the CAFC's *Bilski* decision regarding patentable subject matter, affirmed and expended by the US Supreme Court in 2010, ruled that data is not a physical object or substance which meets the transformation test for patentable

subject matter. This makes moot the limitation "where all the input data represents a physical object or substance". Dependent claims 126-150 are rejected because of their dependence on the rejected independent claims.

7. Claims 148-150 are rejected under 35 USC 101 because the claimed inventions of the independent claims lack patentable utility. Independent claim 148 contains the two statutory classes of a machine readable medium and a computing apparatus, which is not permitted. Dependent claims 149-150 are rejected because of their dependence on rejected independent claim 148.

Claim Objections

8. Claims 148-150 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 125-150 are rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed inventions in claims 1125, 133, 140 and 148 are not supported by either a clearly asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention. Dependent claims 126-150 are rejected because of their dependence on the rejected independent claims.

10. Claims 125-150 are rejected under 35 U.S.C. 112, first paragraph. The specification's guidelines for implementing the invention are filled with subjective judgments and lack a clear set of steps for implementing the invention. No two ordinary practitioners working independently would be able to replicate the end results of another practitioner who has used this invention because of the many subjective inputs and random model outcomes involved in this invention as described in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 125-150 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The independent claims lack the structure needed to understand the invention. Manipulating general data with an unknown model for no stated purpose is indefinite.

12. Future Amendments

Applicant is advised to avoid new matter in complying with these requirements, and to refer to the locations of support in the specification when making such amendments.

Applicant Admitted Prior Art

13. Applicant has failed to traverse the examiner's Official Notice given in the last Office Action regarding the well known nature of renumbered dependent claims 2-62. Therefore, the limitations of claims 2-62 has become Applicant Admitted Prior Art (AAPA) per MPEP MPEP 2104 C 2nd parag. - AAPA - Applic. Admission due to lack of or inadequate Travelsal:

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official

notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.
Applicant has not properly met the traversal requirements of MPEP 2104 regarding the Official Notice taken in the last Office Action regarding claim 126 - induction algorithm; claim 28 - genetic algorithms; claim 130 – entropy minimization, LaGrange, Bayesian and path analysis; claim 131 – tournament use; and claim 132 – a transform predictive model. Consequently, these models are now Applicant Admitted Prior Art (hereafter AAPA).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

EXAMINER'S NOTE: The art rejections below are made in light of the rejections above under 35 USC 101 and 112, the Applicant Admitted Art and the objection to independent claim 148.

14. Claims 125, 126, 129, 133, 134, 137, 141, 144, 148-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandretto (US Patent 5,812,988) in view of Jost et al. (US Patent 5,361,201, hereafter Jost) and Waite (US Patent 4,441,629).
Re. Claims 125, 133, 140 & 148, Sandretto discloses a predictive model method, apparatus, medium and computing infrastructure, comprising:

- receiving first input data into a plurality of different types of initial predictive models for each type of model (Fig. 1A-data storage; Col. 14, data processing, entering estimates of economic variables; a plurality of models - Fig. 1; initial predictive models resulting in initial estimates - Col. 14, l. 40);

- receiving the input data set from (Col. 14, l. 40 – initial estimates) and a second input data as inputs into a second model stage (Col. 14, ll. 47 – different estimates; recursive modeling – 44-45); and
- receiving said second model stage output as an input into a third predictive model stage to develop a final predictive model (Fig. 1; Col. 14, ll. 44-45; Col. 8, l. 52—col. 9, l. 19 – the iterative, recursive steps which has at least three or more stages in predictive modeling).

The following parts of the claim elements do not have patentable weight because they are non-functional descriptive material and/or make intended use statements:

- to develop an initial model configuration by selecting a best fit initial predictive model using a tournament after a training of each predictive model type is completed;
- to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof;
- where all the input data represents a physical object or substance
- where said final predictive model supports a regression analysis.

Sandretto does not explicitly disclose an induction model. However, Jost discloses the use of induction modeling (Front page, OTHER PUBLICATIONS, Cronan, et. al.,) in the context of “Real Estate Appraisal Using Predictive Modeling” (Title).

Sandretto does not explicitly disclose use of a stepwise regression algorithm. However, Waite discloses use of a step-wise regression algorithm in the making of correlations and predictions (Col. 3, l. 46; Col. 8, ll. 7-8).

Therefore, an ordinary practitioner of the art at the time of Applicant’s invention would have seen it as obvious to have combined the disclosures of Sandretto and Jost in developing a computer-implemented predictive model method, apparatus, medium and computing infrastructure, motivated by a desire to provide a method for estimating simulated returns, asset values and risk measures using estimated financial variables

pertaining to an asset, such as economic variables and asset-specific characteristics (Sandretto, Col. 1, ll. 11-15).

Re. Claims 126-132, 134-139, 141-147, 149 & 150, Sandretto generally discloses operation in the context of the claimed methodologies. For example,

Re. Claim 125, 134 and 141, wherein said second model stage receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output (Col. 14, ll. 31-61; Col. 8, l. 52—Col. 9, l. 19).

Re. Claim 129, 137 & 144, wherein an initial predictive model is linear regression (Col. 4, l. 66).

15. Claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146 & 147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandretto in view of Jost and AAPA.

Re. Claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146 & 147, the following modeling and analytical methodologies were AAPA at the time of Applicant's invention: 126 - induction algorithm; 128 - genetic algorithms; 130 – entropy minimization, LaGrange, Bayesian and path analysis; 131 – tournament use; and 132 – a transform predictive model.

Therefore, **re. claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146 & 147,** an ordinary practitioner of the art at the time of Applicant's invention would have seen it as obvious to have combined the disclosures of Sandretto, Jost and AAPA in developing a computer-implemented predictive model method, apparatus, medium and computing infrastructure making use of numerous modeling and analytical methods, motivated by a desire to provide a method for estimating simulated returns, asset values and risk measures using estimated financial variables pertaining to an asset, such as economic variables and asset-specific characteristics (Col. 1, ll. 11-15).

Response to Arguments

16. Regarding the Applicant's arguments received on August 11, 2010 regarding claims 125-150 have been fully considered but they are not persuasive.

ARGUMENT A: Applicant traverses the rejections under 35 USC 101 in the final rejection mailed November 12, 2008 (p. 8, ll. 2-29).

RESPONSE:

Applicant is referred to the new rejections under 35 USC 101 above.

ARGUMENT B: Applicant traverses the rejections under 35 USC 103(a) in the final rejection mailed November 12, 2008 (p. 8, l. 30 – p. 9, l. 17).

RESPONSE:

1) Applicant's argument is a general repetition of prior arguments against similar rejections of similar claims.

2) The examiner's response to these arguments is on the record, especially in the examiner's answer to Appellant's appeal brief mailed May 5, 2010.

3) Applicant fails to address specific claim limitations.

ARGUMENT C: Applicant traverses the rejections under 35 USC 112-1st paragraph in the final rejection mailed November 12, 2008 (p. 9, l. 18 – p. 10, l. 30).

RESPONSE:

1) Applicant fails to address specific claim limitations and fails to address the specific rejection rationale.

2) Applicant is essentially using a copy of the argument made against the rejections under 35 USC 103(a) above along with additional general arguments.

3) Applicant's citation of material contained in patents is not material to examination. Only the MPEP, the statutes and case law are material to a traversal of a rejection.

4) Applicant is referred to the new rejections under 35 USC 112-1st paragraph above.

ARGUMENT D: Applicant traverses the rejections under 35 USC 112-2nd paragraph in the final rejection mailed November 12, 2008 (p. 10, l. 31 – p. 12, l. 2).

RESPONSE:

1) Applicant fails to address specific claim limitations and fails to address the specific rejection rationale.

2) Applicant is essentially using a copy of the argument made against the rejections under 35 USC 103(a) above along with additional general arguments.

3) Only the MPEP, the statutes and case law are material to a traversal of a rejection.

4) Applicant is referred to the new rejections under 35 USC 112-2nd paragraph above.

ARGUMENT E: Commentary regarding Copending Applications, Acknowledgement and Statement under 37 CFR 1.111 (p. 12, l. 3 – 16, l. 17).

RESPONSE:

Applicant is advised to consult the MPEP and that all office actions have been advised, reviewed and signed by a Primary Examiner or Supervisory Primary Examiner.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Siegfried Chencinski whose telephone number is (571)272-6792. The Examiner can normally be reached Monday through Friday, 9am to 6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Alexander Kalinowski, can be reached on (571) 272-6771.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington D.C. 20231

or Faxed to (571*)273-8300* [Official communications; including After Final communications labeled "Box AF"]

or Faxed to *(571) 273*-6792 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to the address found on the above USPTO web site in Alexandria, VA.

SEC

Art Unit 3695
September 28, 2010

/Charles R. Kyle/
Supervisory Patent Examiner, Art Unit 3695